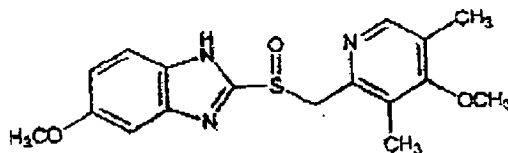


TheMerckIndex Results - Form View

Monograph number: 06913**Title:** Omeprazole**CAS Registry Number:** 73590-58-6**CAS Name:** 5-Methoxy-2-[[[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-1H-benzimidazole**Manufacturers' Codes:** H-168/68**Trademarks:** Antra (AstraZeneca); Gastrogard (Meril); Gastroloc (Pharma-Stern); Losec (AstraZeneca); Mopral (Bracco); Mopral (AstraZeneca); Omepral (Fujisawa); Omeprazen (Malesci); Parizac (Lacer); Pepticum (Andromaco); Prilosec (AstraZeneca); Zoltum (RPR)**Molecular Formula:** C₁₇H₁₉N₃O₃S**Molecular Weight:** 345.42**Percent Composition:** C 59.11%, H 5.54%, N 12.16%, O 13.90%, S 9.28%**Literature References:** Gastric proton-pump inhibitor. Prepn: U. K. Junggren, S. E. Sjostrand, *EP* 5129; *idem*, US 4255431 (1979, 1981 both to AB Hässle). Resolution and activity of enantiomers: P. Erlandsson *et al.*, *J. Chromatogr.* 532, 305 (1990). Manuf process for optically pure salts: S. Von Unge, US 5693818 (1997 to Astra). Pharmacology: P. Muller *et al.*, *Arzneim.-Forsch.* 33, 1685 (1983). Mechanism of action study: B. Wallmark *et al.*, *Biochim. Biophys. Acta* 778, 549 (1984). LC determ in plasma and urine: P. Lagerstrom, B. Persson, *J. Chromatogr.* 309, 347 (1984). Survey of preclinical data: *Scand. J. Gastroenterol.* 20, Suppl 108, 1-120 (1985). Toxicological studies: L. Ekman *et al.*, *ibid.* 53. Clinical trial in Zollinger-Ellison syndrome: C. B. H. W. Lamers *et al.*, *N. Engl. J. Med.* 310, 758 (1984); in duodenal ulcer: K. Lauritsen *et al.*, *ibid.* 312, 958 (1985). Veterinary trial in race horses: M. J. Murray *et al.*, *Equine Vet. J.* 29, 425 (1997). Review of pharmacology and clinical efficacy: H. D. Langtry, M. I. Wilde, *Drugs* 56, 447-486 (1993).**Properties:** Crystals from acetonitrile, mp 156°. Freely sol in ethanol, methanol; slightly sol in acetone, isopropanol; very slightly sol in water. LD₅₀ in mice, rats (g/kg): 0.08, >0.05 i.v.; >4, >4 orally (Ekman).**Derivative Type:** S-Form**CAS Registry Number:** 119141-88-7**Additional Names:** Esomeprazole; perprazole**Manufacturers' Codes:** H-199/18**Literature References:** LC-MS determ in plasma: H. Stenhoff *et al.*, *J. Chromatogr. B* 734, 191 (1999).**Properties:** Colorless syrup. [α]_D²⁰ -155° (c = 0.5 in chloroform).**Derivative Type:** S-Form magnesium salt**CAS Registry Number:** 161973-10-0**CAS Name:** (T-4)-Bis[5-methoxy-2-[(S)-[(4-methoxy-3,5-dimethyl-2-pyridinyl)methyl]sulfinyl]-1H-benzimidazolato]magnesium**Additional Names:** esomeprazole magnesium**Trademarks:** Nexium (AstraZeneca)**Molecular Formula:** C₃₄H₃₈MgN₆O₆S₂**Molecular Weight:** 713.12**Percent Composition:** C 57.26%, H 5.09%, Mg 3.41%, N 11.78%, O 13.46%, S 8.99%**Literature References:** Review of clinical experience in acid disorders: D. A. Johnson, *Expert Opin. Pharmacother.* 4, 253-264 (2003).**Properties:** White powder. [α]_D²⁰ -128.2° (c = 1 in methanol).**Therapeutic Category:** Antiulcerative; in treatment of Zollinger-Ellison syndrome.